

## **Informational Articles.**

**\*\*Can be included in employee newsletter or posted on bulletin board.**

### **Forget Something? A Walk Might Help You Remember**

You can add a sharper memory to the long list of benefits of a brisk walk.

A new study of older adults found that those who walked about 45 minutes three times per week for six months performed substantially better on several cognitive tasks than those who did stretching or strengthening exercises.

And the best part? All of the 124 study subjects had been previously sedentary.

"The nice result of our study is that a person who has not been physically active during his or her younger years still can benefit from walking," noted lead researcher Dr. Arthur F. Kramer of the University of Illinois, Urbana-Champaign.

Not only did the walkers perform better on tests that gauged their ability to plan, establish schedules and switch between tasks, they showed significant improvement in oxygen consumption as well.

Previous studies have shown a link between lifelong exercise and a lower risk of developing Alzheimer's disease. Some have theorized that this is because exercise enhances the production of certain hormones in the brain that provide a protective effect.

Researchers are unclear as to why exercise improved the brain function of the walkers, but they speculate that the improved oxygenation of tissue afforded by increased cardiorespiratory fitness resulted in greater blood flow to the brain.

*Source: Nature, 1999; 400, 418-419.*

### **Exercise Helps Heart Handle Stress**

We know aerobic exercise can lower blood pressure. But most studies demonstrating this effect have looked at healthy adults, rather than the overweight hypertensive adults who are at greater risk of heart disease.

A recent study at Duke University Medical Center in Durham, N.C., found that aerobic exercise can not only help overweight hypertensive adults lower their blood pressure, but also improve their overall cardiovascular response to mental stress, another risk factor for heart disease.

Ninety-nine sedentary overweight men and women with an average body mass index (BMI) of 32 and moderately high blood pressure (130-180/85-105 mmHg) were divided into three groups.

For six months, one group bicycled, walked or jogged three to four hours per week at 70 percent to 85 percent of their initial heart-rate reserve.

A second group followed the same exercise routine, but also consumed a low-fat diet of 1200 to 1500 calories per day.

Compared to the sedentary control group, both exercise groups lowered their blood pressure at rest and when under mental stress.

Other benefits of regular aerobic exercise were lost weight, improved cardiovascular fitness, lowered heart rate, more dilated blood vessels and more efficient pumping of the heart.

*Source: Hypertension, August 2000; 36, 2, 171-176*

### **Build Your Muscles, Build Your Brain**

An active lifestyle has benefits beyond the body. A new study suggests that being active can stimulate brain cell growth and lower the risk of developing Alzheimer's disease.

German researchers put 30 adult female mice in an "enriched environment" that included toys, a running wheel and unlimited food and water for 10 months.

Compared to mice kept in cages, the active mice grew five times more new brain cells and showed fewer signs of age-related brain degeneration. They also were more curious about their surroundings and better able to learn new things.

"Our study suggests that, in mice, we can reduce the effects of aging on the brain with a sustained active and challenging life, even if this stimulation is only begun in middle age," writes Gerd Kempermann, M.D., lead author of the study.

While study results in mice don't always transfer to humans, Kempermann suggests that people who change their behavior because of this study "will certainly do no harm" and that "they might even do something good for the brain cells that are involved in learning and memory processes."

*Source: Annals of Neurology, 2002; 52, 135-143*

## **For Older Adults, A Little Exercise Goes A Long Way**

Just one workout a week is all it takes for older adults to maintain their strength and, possibly, their independence, according to a new study from researchers at the Human Performance Laboratory at Ball State University, Muncie, Ind.

Ten sedentary 70-year-old men were recruited to take part in a 12-week strength-training program.

After training three times per week, the men had increased their muscle size and strength by 50 percent.

At the end of the program, half the men went back to their sedentary ways, while the other half did the same routine, but only once per week.

After six months, the sedentary men had lost much of their muscle size and strength, but the once-a-week exercisers were still going strong.

Sarcopenia, or loss of muscle size and strength, is a major cause of the falls and injuries among older adults that result in a loss of independent living.

"One day per week seems to be effective," writes Scott Trappe, Ph.D., in the April issue of the *Journal of Gerontology: Biological Sciences*.

"Older adults could engage in a low-volume, high-intensity resistance-training program and still maintain independence and reduce their chances for falls and injuries."

*Source: Journal of Gerontology: Biological Sciences, 2002; 57, B138-B143*

## **Strength Training Benefits More than Muscles**

Regular weight training does more than just build better muscles, it builds a better, healthier body.

Several new studies confirm the benefits of mild-to-moderate resistance training, which includes reduced blood pressure, lower LDL ("bad") cholesterol levels and higher HDL ("good") cholesterol levels, all of which improve cardiovascular health overall.

Weight training is also believed to improve the way the body processes sugar, which could reduce the risk of developing diabetes.

Another study examined the effect of weight training on osteoarthritis, a common condition among older adults that affects balance and increases the risk of falling.

This study and others confirm that exercise of any kind improves strength, gait and ability to perform activities of daily living among older adults with osteoarthritis, and, in many cases, reduces the pain associated with the disease.

*Source: Circulation: Journal of the American Heart Association, February 22, 2000; Hypertension: Journal of the American Heart Association, (35) 2000; Journal of the American Geriatrics Society, 2000; 48: 131-138.*

## **It Makes You Feel So Young**

Could exercise be the source of that elusive fountain of youth?

Consider this: Just six months of moderate physical activity may help turn back the clock as much as 30 years, according to the results of a recent, albeit small, study.

In 1966, researchers tested the aerobic capacity of five healthy 20-year-olds after three weeks of total body rest.

Fast-forward 30 years to 1996. These same five men, now middle-aged, took part in a program of moderate exercise, one hour, four to five times per week.

Before beginning the program, participants' weight, body fat and aerobic capacity were measured, and the results were not good.

Over the years, average weight had climbed an average of 25 percent while body fat doubled and aerobic capacity had declined by 11 percent.

Remarkably, 30 years had done less harm to participants' aerobic capacities than had the three weeks of bed rest in 1966.

But the best news is that after six months, the men had regained the cardiovascular fitness levels they had enjoyed as 20-year-olds, increasing their aerobic capacity by an average of 15 percent.

"This study clearly provides evidence that even an older person who has failed to maintain fitness over time can benefit from an exercise program," said Dr. Benjamin Levine, associate professor of internal medicine and director of the Institute for Exercise and Environmental Medicine, a joint venture between UT Southwestern and Presbyterian Hospital of Dallas.

"Starting an exercise program when you are older is still useful and can combat the effects of aging. Moreover, if you stop exercise, you can lose what you have gained relatively quickly," explained Levine, who co-authored the study.

Therefore, exercise must be a lifelong health habit - like brushing your teeth or taking a shower - that can and should be sustained throughout life."

*Source: Circulation, 2001; 104, 1350-1357*

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## **Don't Skip Breakfast to Cut Calories**

When it comes to cutting calories, breakfast is often the first thing to go.

But new research suggests that people who are successful at losing weight – and, more importantly, keeping it off – eat breakfast every day.

Researchers from the Center for Human Nutrition at the University of Colorado Health Sciences Center in Denver analyzed data on nearly 3,000 people who had lost, on average, 70 pounds and kept it off for a year or more.

Study subjects were enrolled in the National Weight Control Registry, which is an ongoing study of adults who have successfully lost 30 pounds or more. Only four percent said they never eat breakfast every day.

It is not known what subjects ate for breakfast (although the study was funded by cereal giant General Mills), but most followed a high-carbohydrate, low-fat diet.

Researchers speculate that eating breakfast helps people manage both their hunger and food intake throughout the day.

*Source: Conference of the American Society for Clinical Nutrition, February 26, 2002, San Diego, Calif.*